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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,442	11/28/2006	James P. Pfau	16240.M303A	2477

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EXAMINER	
NELSON, MICHAEL B	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
03/31/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,442	PFAU ET AL.	
	Examiner	Art Unit	
	MICHAEL B. NELSON	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 17-32* is/are pending in the application.

4a) Of the above claim(s) *24-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,17-23 and 30-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/26/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendments filed on 01/26/09 have been entered. Claims 1-14, 17-23 and 30-32 are currently under examination on the merits. Claims 24-29 are withdrawn from consideration. Applicant's right to a rejoinder of the product and process claims upon allowance of the product claims is acknowledged however the product claims remain rejected below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4, 7-14, 22, 23 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford et al. (U.S. 2002/0091218) in view of Watterson, et al. (U.S. 5,919,554).

Regarding claim 1, Ford et al. discloses a composite door skin (See Abstract) comprising 66% polypropylene resin, 15% glass fiber, and 15 % mineral filler (i.e. talc) ([0033]). The method of forming the door (i.e. combining all the ingredients into a hopper, melting them and forming the door in a mold, [0038]) would result in the glass fibers being randomly oriented within the composite.

Ford does not specifically disclose that Mica be used as a mineral filler, although talc and calcium carbonate are disclosed ([0035]). Watterson et al. discloses a reinforced resin based composite material for construction panels (C1, L10-30) in which mineral fillers, inter alia talc, mica and calcium carbonate, are used as mineral fillers in order to improve shrinkage and lower the cost to manufacture (C4, L30-45).

The inventions of both Ford et al. and Watterson et al. are drawn to the field of reinforced composite materials and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the composition of Ford et al. by using mica as a miner filler as taught by Watterson et al. for the purposes of imparting improved shrinkage and reduced cost to manufacture.

Regarding claim 2-4, 7-14, 16, 22, 23 and 30-32, Ford et al. discloses all of the limitations as set forth above. Additionally, Ford et al. discloses that the door skin is a molded door facing ([0037]-[0047] and Fig. 1) with a rectangular shape and inner and outer sides with a plurality of panels on the outer side. The resins disclosed for use in the composite include polypropylene and high impact polystyrene ([0034]). An example is given in which the composite comprises 66% polypropylene resin, 15% glass fiber, and 15 % mineral filler (i.e. talc) ([0033]). The glass fibers are disclosed as having a length of 4mm ([0033]). Wood fibers additives are also disclosed in the invention at proportions of 20% fiber to 80% resin ([0034] and [0035]). The door skins are shown as being put on both sides of a door frame (Fig. 7).

Regarding the amount of filler used in the composition, while modified Ford et al. does not explicitly disclose an amount of filler which reads on the instantly claimed range of claim 14, one having ordinary skill in the art would have adjusted, through routine experimentation, the amount of filler in the composition, in order to optimize the shrinkage and the cost to manufacture while at the same time maintaining the structural integrity of the final molded product.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford et al. (U.S. 2002/0091218) in view of Watterson, et al. (U.S. 5,919,554), as applied to claim 1 above, in view of Bradley (U.S. 6,209,172).

Regarding claims 5 and 6, Ford et al. discloses all of the limitations as set forth above. Ford et al. does not specifically disclose that the inner side of the door skin be molded so as to

include reinforcing ribs. Bradley discloses a door panel in which reinforcing ribs are provided along the inner side to provide reinforcement to the wall facing part (C3, L1-20 and Fig. 3).

The inventions of both Ford et al. and Bradley are drawn to the field of door panels and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the structure of the door panel of Ford et al. by including the ribs of Bradley for the purposes of imparting improved reinforcement.

Regarding the arrangement of the ribs, modified Ford et al. does not disclose the specific arrangement as instantly claimed, however, one having ordinary skill in the art would have adjusted, through routine experimentation, the positioning of the ribs in the door panel in order to optimize the reinforcement at localized portions of the panel while at the same time minimizing costs of manufacture.

7. Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford et al. (U.S. 2002/0091218) in view of Watterson, et al. (U.S. 5,919,554) as applied to claim 1 above, in view of Sasaki et al. (U.S. 6,313,184).

Regarding claim 17, Ford et al. discloses all of the limitations as set forth above. Ford et al. does not explicitly disclose the limitations on the polypropylene resin of instant claim 17. Sasaki et al. discloses a polypropylene resin composition with a melt flow rate of 0.5-12 g/10 minutes (See Abstract) which is especially useful for molded articles requiring high impact resistance (C1, L15-35) including door panels (C10, L40-65).

The inventions of both Ford et al. and Sasaki et al. are drawn to the field of resin blends for use with molded door panels and therefore it would have been obvious to one having

ordinary skill in the art at the time of the invention to have modified the polypropylene resin of Ford et al. by using the polypropylene resin of Sasaki et al. for the purposes of imparting high impact resistance.

Regarding the limitations of instant claims 18-21, while modified Ford et al. does not explicitly disclose the recited mechanical and thermal properties, one having ordinary skill in the art would have optimized the stiffness, impact strength and toughness of the composite door by varying the relative amounts of the ingredients disclosed and by varying the shape and forming method of the door. The coefficient of thermal expansion (i.e. shrinkage) would have likewise been optimized by controlling the amount of the various ingredients (including mineral filler) as taught by Watterson et al. (C4, L30-45).

Response to Arguments

8. Applicant's arguments are considered moot in light of the new grounds of rejection which were necessitated by applicant's amendments. Arguments which are still deemed to be relevant are addressed below.

9. Regarding applicant's arguments against the combination of Ford et al. and Watterson et al., while Watterson et al. does disclose thermosetting resins, the teaching of mineral fillers would be applicable to all composite materials. Watterson et al. discloses several reasons for using the mineral fillers which would be applicable to both thermosetting and thermoplastic based composites (i.e. shrinkage and lower production costs). The examiner notes that shrinkage is a type of warping and therefore refutes applicant's statement that thermosetting resins do not

experience warping. Moreover, the advantage of reduced production costs would have provided an independent reason for using the fillers.

10. Regarding applicant's declaration of unexpected results of mica over the other mineral fillers, several deficiencies in the declaration have been noted. Firstly, the comparison is not a proper side by side comparison since different amounts of glass fiber and mineral filler are used. This invalidates applicant's results since it is unclear if the resulting properties are due to mica being present over the talc or if it is due to the differing amount of mineral filler in general. Secondly, applicant uses only talc as a mineral filler and yet Ford et al. mentions several other mineral fillers ([0035]) which might result in a composition having a coefficient of thermal expansion which would render the use of mica entirely expected. Lastly, applicant does not perform tests which cover the entire range of amounts disclosed in Ford et al. Ford et al. discloses one example with 15% mineral filler and then goes on to say that the amount of thermoplastic resin could be varied, which implicitly means that the amount of the other materials being varied. Therefore, the mineral fillers of Ford et al. must be tested against the instant mica at varying percentages of the overall composition to show that at each percentage the same unexpected result is observed.

As set forth in MPEP 716.02(d), whether unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support". In other words, the showing of unexpected results must be reviewed to see if the results occurred over the entire claimed range, *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980).

11. Regarding applicant's arguments against the combination of Ford et al. and Bradley et al., the size of Bradley et al.'s door does not preclude the ribs from reducing warping and providing structural support as would be obvious to one having ordinary skill in the art.

12. Regarding applicant's arguments against the combination of Ford et al. and Sasaki et al., firstly the examiner would like to point out that this line of argument is technically moot in light of the new grounds of rejection (i.e. Ford et al. in view of Watterson et al. in view of Sasaki et al.) The incorporation of claim 15 into claim 1 resulted in the limitations of claims 17-21 being combined with the limitations of claim 15 for the first time and therefore was an amendment which resulted in new rejections. More to the point, the recited properties may not be inherently present in the prior art; however, given the materials used in the prior art and given the intended use of said materials for composite door construction, the recited properties are ones which would have been obviously controlled by one having ordinary skill in the art to provide a composite door having the highest commercial appeal.

13. Regarding applicants arguments against the combination of Ford et al. and Sasaki et al., the examiner notes that impact resistance is a property that would be obviously beneficial to a composite door and the disclosure of Sasaki et al. for using the material in skin materials of door panels seems to more closely associate the two disclosures given that Ford et al. is also directed towards a door panel skin material. Regarding applicant's arguments against the materials aesthetic qualities, nowhere in the prior art is such a detrimental property disclosed, nor is it required that the material be exposed in order for it to be in skin materials for door panels (i.e. it could be covered).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1794

/MN/
03/13/09